END STAGE RENAL DISEASE

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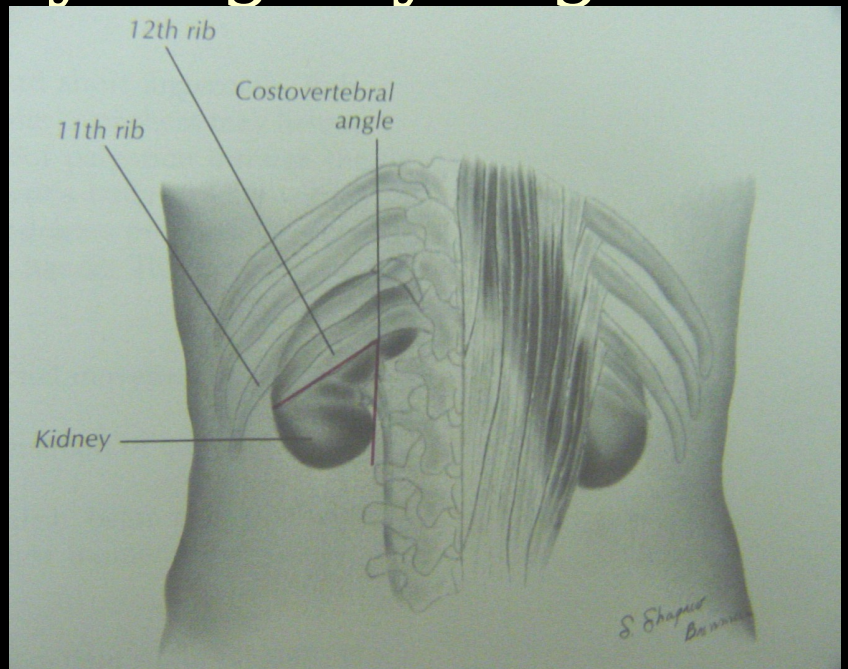
Kidneys

- Located in the posterior abdomen
- partially protected by the ribs
- left kidney slightly higher than right



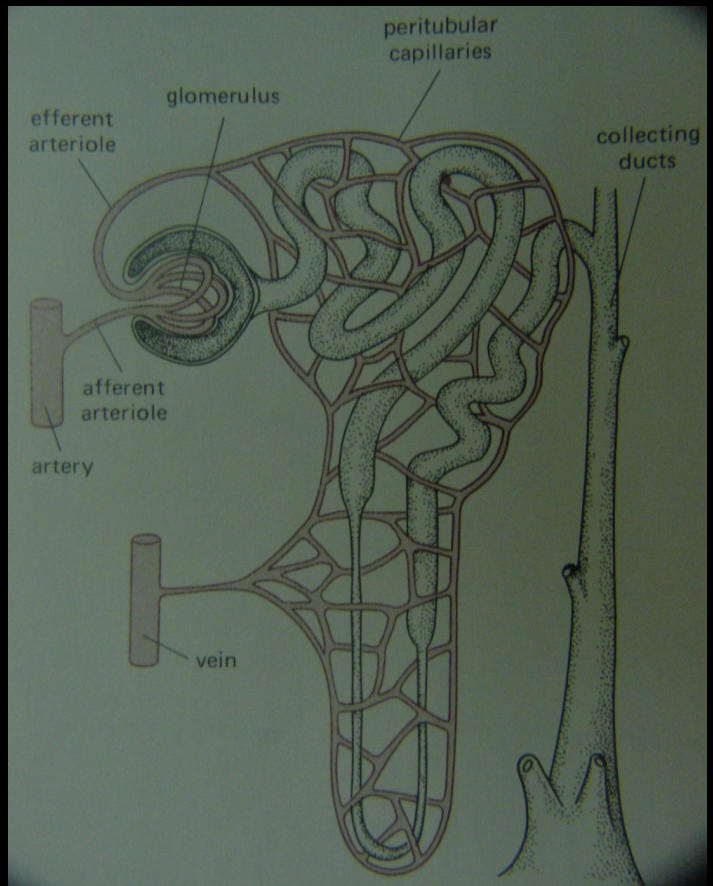
Nephron

- the functional unit of the kidney

-glomerulus

-tubule

-vasculature



Renal Failure

- Diminished renal reserve
- Renal insufficiency
- Renal failure
- Uremic syndrome

End Stage Renal Disease

- What is it?

  It is the stage of Chronic Renal Failure (CRF) where renal function is not sufficient to sustain life.

Clinical signs of renal failure/ESRD

- Occur in virtually every system of the body

  Cardiovascular

  Hematopoietic/immunologic

  Neuromuscular

  Endocrine/genitourinary

  Dermatological

  Gastrointestinal

Medical Management

- Depends on the extent of damage
- may range from dietary changes to dialysis to renal replacement

  dietary changes may include a **HIGH CARBOHYDRATE**/low protein diet

Oral Manifestations

- May appear at any point in renal failure
- 90% of renal patients will show oral symptoms

  -bad odor/metallic taste

  -dry mouth and parotitis

  -pallor of the mucosa

  -uremic stomatitis

Oral manifestations

-LOW Caries Rate

-severe erosion

-renal osteodystrophy

-tooth mobility

Dental Management Considerations

- Greatest risks associated with excessive bleeding, infection, and medications used
- For conservative medical care
- For advanced medical care (hemodialysis)
- For the transplant patient

Antibiotic prophylaxis

- The decision to use antibiotic prophylaxis should be based on consultation with the patient's physician
- If prophylaxis is warranted, the AHA regimen is recommended

Pharmacological considerations

- Reduced elimination/excretion
- decrease the amount of drug administered but maintain the dosing interval
- maintain the amount of drug per dose but increase the dosing interval

NSAIDS

- May compromise renal blood flow
- usually will result in acute renal failure that is reversible
- Ibuprofen

  -may result in renal failure in compromised patients

  -renal side effects noted at anti-inflammatory doses of >/=1600mg/day

Summary

- In the United States:

  ->300,000 people undergoing treatment for ESRD (220,000 dialysis; 86,000 transplant)
- Diabetes and HTN often implicated in the development of ESRD
- 60,000 die annually as a result of ESRD
- Be familiar with the complexity of treatment for these patients